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Fall 9-1-2000

### GEOG 387.01: Principles of Digital Cartography

Steven R. Holloway

*The University of Montana*

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The University of Montana: College of Arts and Science; Geography

*Autumn 2000 Principles of Digital Cartography*

**Geography 387/395 Social Science #362**      **Class:** Mon 11-12/Wed 11-1      **Lab:** Fri 11-1  
**Field Trip:** Sat Sept 16<sup>th</sup> 9-4 Old Milwaukee Depot and Fri Oct 6<sup>th</sup> 11-12:30 Printing Services  
**Final Meetings:** Mon Dec 18<sup>th</sup> 8-10 and Fri Dec 22<sup>nd</sup> 11-1  
**Steven R Holloway**      *oikos@selway.umt.edu*      *http://ssrl.soc.umt.edu/holloway/*  
Social Science #210 243.4508      Office Hours: M-Th 10-11  
**Required Texts**      Dorling & Fairbairn: *Mapping: Ways of Representing the World*, Lauer & Pentak: *Design Basics* and additional readings packet (available from Geography office after 9/12)  
**Required Materials**      Box materials (cardboard, knife, glue & fabric), ZIP disks and selected InkJet printing papers  
**Optional Text**      *Goodes World Atlas*      **Optional Materials**      Strathmore InkJet printing papers, 9x12 Art Book and Studio/Sketching pencil set

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**Topics**      **On The Nature of Cartography Today;** What is a map? Content and concepts of maps.  
Earth-map relations; Co-ordinate systems, projections, navigation, and basic geodesy.  
**History of Cartography;** Maps as stories, how maps work, land-ownership, GIS.  
**Production and Printing of Maps;** Reproduction, production and distribution.  
**Cartographic Abstraction;** Generalization, symbolization, the problem of relief.  
**Sources of Data;** Sampling, census data, imagery and digital libraries.  
**Data Processing;** Images, databases, statistical processing and census data.  
**Alternative Views;** How to lie, propaganda, fiction vrs non-fiction, war and place-names.  
**Perception and Design;** Design Principles (process, unity, emphasis, scale, balance and rhythm), and Design Elements (line, shape, texture, space, motion, value, and color).

**Projects**      *All projects are DUE on the date specified. Be sure to include your name and the date on all projects. Late projects will be accepted only with a sound excuse and at a reduced grade. All projects are not equal in their effort and therefore in what they are worth. The graduate increment is a map report presented to the class along with submitted written copy. In addition to the assigned readings to be discussed in class and lab exercises there will be the following projects;*

Definition of a map and boxed map collection  
Field sketch map, notes, GPS and annotated map showing journey  
Projection series with paper  
Dot and Choropleth map series with histograms, paper and slides  
Isarithmic and relief map series with paper  
Original map-broadside of the "west"

**Software**      *All software needed to complete the projects is available on the computers in the Social Science Research Lab rooms 252, 258 and 362; Adobe Illustrator with MAPublisher, Trimble GPS Pathfinder, Adobe Photoshop, MicroCAM, ESRI ArcView, Golden Software Surfer, Golden Software Digizer and Golden Software Map Viewer.*

**Evaluation**      *Come prepared to discuss assigned readings and critique projects. Map critiques are an important part of learning to produce effective and good maps. Be sure to be prepared by bringing your completed project to class. There are three areas on which you will be evaluated; 1) class participation & attendance, critiques, discussions, reports and map collections 2) exam on topics covered during class, and 3) quality of project completion and use of software.*